



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/034,901

12/27/2001

George Cintra

08935-249001 /M-4965

1584

26161

7590

09/03/2003

FISH & RICHARDSON PC
225 FRANKLIN ST
BOSTON, MA 02110

EXAMINER

ALEJANDRO, RAYMOND

ART UNIT

PAPER NUMBER

1745

DATE MAILED: 09/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/034,901

Applicant(s)

CINTRA ET AL.

Examiner

Raymond Alejandro

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 5-8, 12, 13 and 16-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 9-11, 14-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I and Species I (claims 1-4, 9-11 and 14-15) in Paper No. 6 is acknowledged.

Drawings

2. The sheets of drawings filed on 03/13/02 have been accepted.

Specification

3. The disclosure is objected to because of the following informalities: the specification contains an incomplete text (see page 9). Appropriate correction is required.
4. The disclosure is objected to because of the following informalities: the specification makes reference to US patent applications, however, the status of nonprovisional parent application(s) (whether patented or abandoned) should also be included (*if the application has become a patent, the expression "now Patent No. _____" should follow the filing date of such application; otherwise, if the application has become abandoned, the expression "now abandoned" should follow the filing date of the application*). Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 1745

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-4, 9-11 and 14-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Johnson 6402796.

The instant application is directed to a method of making a battery electrode wherein the disclosed inventive concept comprises forming a cathode layer and removing the substrate. Other limitations include the cathode mixture; the substrate material; the current collector; the binder and the continuous process.

As to claim 1:

Johnson discloses a method of producing a battery wherein the method commences with a substrate 11 upon which the layers of battery components are built upon; the substrate is then remove and replaced with a cathode current collector (ABSTRACT/COL 3, lines 24-45).

Johnson discloses the following (COL 1, lines 43-47/ CLAIMS 1 and 8):

In a preferred form of the invention a method of producing a method of producing a thin film battery cell comprises the steps of providing a supporting substrate, depositing a cathode upon the substrate, depositing an electrolyte upon the cathode, and removing the substrate from the cathode.

10 1. A method of producing a portion of a thin film battery cell comprising the steps of:

- (a) providing a supporting substrate;
- (b) depositing a cathode upon the substrate;
- (c) depositing an electrolyte upon the cathode; and
- 15 (d) removing the substrate from the cathode.

30 8. A method of producing a portion of a thin film battery cell comprising the steps of:

- (a) providing a substrate made of a sputterable material;
- (b) depositing a cathode upon the substrate; and
- (c) sputtering the substrate so as to substantially remove the substrate from the cathode.
- 35

Art Unit: 1745

As to claim 2:

It is disclosed that the cathode sputtering device has a LiCoO_2 target or other suitable litigated metal oxide target that is energized so that battery cathodes are deposited upon the substrate (COL 3, lines 38-42). *Thus, the lithiated metal oxide compound is the active material mixture of matter acting as the slurry.*

As to claims 3-4:

Johnson disclose that the substrate can be either a metal or polymeric material (COL 3, lines 24-25/COL 5, lines 25-28):

compounds. It should also be understood that other materials²⁵ may be utilized for the web substrate such as nickel, copper, nickel-copper compounds, other metals and some polymers, such as polyethylene. Furthermore, it should also be under-

As to claims 9-10:

It is disclosed that as the web continues about the aligning drum 62 the web passes below the cathode current collector mask 68 and adjacent the cathode current collector sputtering device, so that the cathode current collector device 67 deposits a very thin cathode current collector 18 thereon (COL 4, lines 54-62). It is further discloses that the web may be wound upon the aligning drum 62 in such a manner so that complete battery cells are stacked in alignment one upon the other (COL 4, lines 63-67). *Thus, the layers are stacked one upon another, at least, under certain degree of pressure.*

As to claim 11:

It is disclosed that the a protective coating may then be deposited upon the current collector to allow later stacking of the battery (COL 4, lines 35-39). *Thus, the protective coating assists to bind together the stackable components.*

Art Unit: 1745

As to claims 14-15:

Johnson teaches that the process of depositing cathode materials continues until substantially the entire substrate web is coated (COL 3, lines 43-46). Johnson further discloses that the process is continuously carried out (COL 3, lines 46 to COL 4, lines 62). *Thus, the steps of forming the layer and removing the substrate are continuous.*

Thus, the claims are anticipated.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond Alejandro whose telephone number is (703) 306-3326. The examiner can normally be reached on Monday-Thursday (8:30 am - 7:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on (703) 308-2383. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Raymond Alejandro
Examiner
Art Unit 1745

